



## The Farm.

## OUR FRENCH LETTER.

PARIS, December 20, 1881.

## PASTURE AND MEADOW LANDS IN FRANCE.

The question of pasture and meadow lands is assuming important proportions in France, and the recent work of M. Joule has only added to the interest felt in the subject. It is a fact, officially stated, that in the region where pasture lands abound, farming is more flourishing than elsewhere. In presence of such data, examination becomes a necessity. Connected with the matter is the rearing of stock, which has largely increased of late, owing to the cost involved in the cultivation of wheat, the supplies of grain exported from other countries, and the assured demand for meat in the home market. Many agriculturists have not hesitated to solve the question practically, by converting their land into meadows, or pastures. M. de Gasparin has made a profound remark: many farmers are ruined in consequence of having too much land, but not one has ever come to misfortune by having too much meadow. In all good grass land, whether artificial or permanent, there must be a relative proportion between the grainiferous and leguminous plants. Taking as a base ten tons of hay, produced from such a mixture of plants, that eminent chemist, M. Joule, finds therein 376 lbs of nitrogen; 156 lbs of phosphoric acid, 211 lbs of lime, 59 lbs of magnesia, and 303 lbs of potash; thus compared with other cultivated crops, it is not the most exhausting, with sugar beet for example, which extracts the largest quantities of chemical substances from the soil, 20 tons of sugar beet per acre, carry off from the soil 163 lbs of nitrogen and 136 lbs of phosphoric acid, then follow many varieties of wheat which are also exhausting. Now manures are reserved for root and grain crops, grass land receiving none. How then does it arise that meadows retain their fertility? They become poorer, but do not disappear; the valuable grasses die out, and are succeeded by inferior kinds; it is then not so much the quantity of the returns that is affected, as the quality. Further, meadows are generally established in the best soil, often in valleys, where the filtering waters bring them nutrition from the more elevated land. In 2 cwt's of ordinary arable soil, there are: nitrogen 3 1/2 oz; phosphoric acid 5 1/2 oz; lime 17 oz; magnesia 10 1/2 oz; potash 8 1/2 oz; the average depth of soil at 8 inches, an acre would contain about 32 cwt's of nitrogen, and the same quantity of phosphoric acid, the other chemical elements in proportion. There is here an enormous difference between what the soil has in store of chemical food and what vegetation exacts. An acre of beet requires, as we have seen, 163 lbs of nitrogen, while the soil contains 32 cwt's of this element, or a sufficiency for 23 crops of beet. A like observation will apply to the other inorganic nutriments. M. Joule explains this disproportion by the fact, that each chemical element exists in the soil in two forms, assimilable and unassimilable. Did the soil contain all the food in the former state, it would be washed away and the land rapidly exhausted; existing in an insoluble or fixed form, the azote, phosphoric acid, etc., yield only each year their treasures to vegetation in fractional quantities. M. Joule draws a comparison between grazing and cutting meadow. He inclines to the former, because the animals find in the succulent and above all the young grasses, more nitrogenous matters, and of greater digestability than when in the form of hay. The chemist also avers, that in an economical point of view, the droppings of the animals restore immediately to the soil all the nutritive elements that the animal has not utilized, thus saving the labor of being converted into farmyard manure. Chemically, all soils are not suited for grass culture, but they can not be less made so by judiciously selecting the kinds of grass and clover most propitious; resorting to fossil phosphates, lime, man, and fertilizers to supply richness. M. Joule belongs to the school which believes in the atmosphere supplying azote to the nutrition of plants. In the department of the Nievre the rearing of stock is the chief feature of agriculture, and the farmers have become immensely rich since half a century; meadows there are not permanent, and the land receives no other manuring than the droppings of the cattle; lime is added largely to stimulate clover, and when after eight years a meadow is broken up, oats are sown on the lea, then three grain crops, the fourth, oats along with clover and selected grass seeds; the meadows are never mown, and one head of cattle per acre is the ratio allowed. The stock are duly sent to the best sugar growers of the North to be fattened. The general relation in the Nievre is, eight or ten years grass, then oats, two wheats, and oats as above, but no manure is ever added to the soil; the soil is a sandy clay, and lets readily for 30 to 40 francs per acre.

## The Application of Farmyard Manure.

The economical application of farmyard dung must, to a certain extent, be based upon the composition, and there are two processes by which this may be ascertained, first by direct analysis, and second by calculation. Many years ago I published a series of calculations based upon the food consumed upon a farm of 400 acres, the quantity of straw used as litter, and the loss by respiration. The farm was estimated to have 100 acres in turnips or mangels, 100 in hay, and 200 in wheat and barley. The amount of dung produced was equal to 957 tons (of 2,000 pounds), or about 24 tons for each acre. The composition per ton was as follows:

## Wool Under the Microscope.

M. B. Anderson, of Rochester University, is collecting specimens of wool, and other textile materials, from all parts of the world, and has already collected quite

Potash..... 104  
Nitrogen..... 13

This estimate agrees very well with the analyses made by Boussingault, Voelcker and ourselves, and may be said to represent the composition of good unfermented farmyard manure. We are indebted to Dr. Voelcker for several analyses of the dung in different stages of decomposition, and we show that only a very small proportion, probably not more than two pounds of the 13 pounds of nitrogen contained in each ton, is in the form of ammonia. Considerably more than 90 per cent of the whole of the dung consists therefore of water and wood. A large proportion of the manure constituents of the dung exists in combination with the straw or the solid excrements of the animals, substances which decompose very slowly in the soil, and for this reason it takes a larger amount of dung to produce much effect on vegetation. Our experiments lead us to the conclusion that the influence of one dressing of dung may not be entirely at an end for 20 or 30 years, or perhaps even a longer period.

With the composition of dung before me, and the known composition and condition of the various ingredients it contains, the question has often occurred to me as to whether it will be possible to do anything by way of improving its fertilizing powers. Ought we to fix the ammonia, or ought we to try and manipulate it in some way to hasten its action? If we can get the full effect of an artificial manure in one year, why must we wait a lifetime to see the end of one application of dung? Time is money; the old-fashioned idea that a manure is valuable for its lasting properties will not bear argument, as, if true, it would be better to leave bones and phosphate rock unground.

In this all good grass land, whether artificial or permanent, there must be a relative proportion between the grainiferous and leguminous plants. Taking as a base ten tons of hay, produced from such a mixture of plants, that eminent chemist, M. Joule, finds therein 376 lbs of nitrogen; 156 lbs of phosphoric acid, 211 lbs of lime, 59 lbs of magnesia, and 303 lbs of potash; thus compared with other cultivated crops, it is not the most exhausting, with sugar beet for example, which extracts the largest quantities of chemical substances from the soil, 20 tons of sugar beet per acre, carry off from the soil 163 lbs of nitrogen and 136 lbs of phosphoric acid, then follow many varieties of wheat which are also exhausting. Now manures are reserved for root and grain crops, grass land receiving none. How then does it arise that meadows retain their fertility? They become poorer, but do not disappear; the valuable grasses die out, and are succeeded by inferior kinds; it is then not so much the quantity of the returns that is affected, as the quality. Further, meadows are generally established in the best soil, often in valleys, where the filtering waters bring them nutrition from the more elevated land. In 2 cwt's of ordinary arable soil, there are: nitrogen 3 1/2 oz; phosphoric acid 5 1/2 oz; lime 17 oz; magnesia 10 1/2 oz; potash 8 1/2 oz; the average depth of soil at 8 inches, an acre would contain about 32 cwt's of nitrogen, and the same quantity of phosphoric acid, the other chemical elements in proportion. There is here an enormous difference between what the soil has in store of chemical food and what vegetation exacts. An acre of beet requires, as we have seen, 163 lbs of nitrogen, while the soil contains 32 cwt's of this element, or a sufficiency for 23 crops of beet. A like observation will apply to the other inorganic nutriments. M. Joule explains this disproportion by the fact, that each chemical element exists in the soil in two forms, assimilable and unassimilable. Did the soil contain all the food in the former state, it would be washed away and the land rapidly exhausted; existing in an insoluble or fixed form, the azote, phosphoric acid, etc., yield only each year their treasures to vegetation in fractional quantities. M. Joule draws a comparison between grazing and cutting meadow. He inclines to the former, because the animals find in the succulent and above all the young grasses, more nitrogenous matters, and of greater digestability than when in the form of hay. The chemist also avers, that in an economical point of view, the droppings of the animals restore immediately to the soil all the nutritive elements that the animal has not utilized, thus saving the labor of being converted into farmyard manure. Chemically, all soils are not suited for grass culture, but they can not be less made so by judiciously selecting the kinds of grass and clover most propitious; resorting to fossil phosphates, lime, man, and fertilizers to supply richness. M. Joule belongs to the school which believes in the atmosphere supplying azote to the nutrition of plants. In the department of the Nievre the rearing of stock is the chief feature of agriculture, and the farmers have become immensely rich since half a century; meadows there are not permanent, and the land receives no other manuring than the droppings of the cattle; lime is added largely to stimulate clover, and when after eight years a meadow is broken up, oats are sown on the lea, then three grain crops, the fourth, oats along with clover and selected grass seeds; the meadows are never mown, and one head of cattle per acre is the ratio allowed. The stock are duly sent to the best sugar growers of the North to be fattened. The general relation in the Nievre is, eight or ten years grass, then oats, two wheats, and oats as above, but no manure is ever added to the soil; the soil is a sandy clay, and lets readily for 30 to 40 francs per acre.

## The Agricultural Products of Kansas in 1881.

The Fourth Quarterly Report of the Kansas State Board of Agriculture for 1881, which will be issued during the first week in January, will contain, together with many other matters, a complete statistical exhibit of the agricultural growth of the State during the past year. Many of the statistical tables are now prepared, and the following facts and figures are gathered from them:

The total value of the product of the 22 field crops raised in 1881 is \$91,910,439 27, or more than 30 per cent greater than in any previous year in the history of the State. The two that contribute the largest share of this immense total are wheat and corn; the former making \$21,705,275 80, and the latter, \$44,859,063 29.

In production, average yields were not so large as in 1880, but the increased price of farm products made the product of this year much more valuable.

The yield of wheat (winter and spring) was 20,479,689 bushels; corn, 80,760,542 bushels. Of oats, 9,900,768 bushels were raised, and are valued at \$3,855,749 77. Irish potatoes, 1,854,140 bushels, with a value of \$2,710,377 50. The hay crop, consisting of millet, Hungarian, timothy, clover and prairie, aggregated 2,002,087 tons, with a value of \$11,594,594 98.

The minor crops the following products and values are given: Rye, 986,508 bushels—\$735,553 27; barley, 110,123 bushels—\$87,628 80; buckwheat, 58,621 bushels—\$43,065 75; sweet potatoes, 210,062 bushels—\$29,482 95; sorghum, 3,899, 440 gallons—\$1,745,871 45; castor beans, 393,549 bushels—\$497,378 13; cotton, 338,070 pounds—\$88,805 30; flax, 1,184,445 bushels—\$1,357,948 61; hemp, 629,160 pounds—\$44,041 20; tobacco, 797,820 pounds—\$79,781; broom corn, 32,961,150 pounds—\$450,115 75; rice corn, 520,534 bushels—\$314,787 12; and pearl millet, 60,176 tons—\$165,563.

I did not grow roots I should apply the dung in autumn to the clover or grass; this of course, would involve exposure to the atmosphere, but I should not fear much loss on this account, or at all events I do not think there would be more by this process than any other.

To give some idea of our attempt to estimate the loss of the ingredients contained in dung, I may say, that we applied it to grass land between 1856 and 1863, and having taken a crop of hay every year since, at the end of 20 years we had only got back 15 per cent. of the nitrogen supplied in the manure, less than one-half of the potash, and not much more than one-third of the phosphoric acid. The effect of the dung last applied 18 years ago is still quite distinct, and when it will come to an end no one can predict. On the whole, as regards the question of economy, I am therefore inclined to advise that the dung should be carted from the yards to the fields, and left there in a heap until required for application, or that it should be applied direct from the yards. All labor expended upon dung adds certainly to the cost, but it does not add with the same certainty to its value.—J. B. Lanes.

## Selling Hogs and Buying Bacon.

The Clarkville (Ia) Star is looking after the interest of that State, and goes for the farmers in regard to the inconsistency of their ways as follows:

It is one of those anomalous facts to be noted, that Iowa, although one of the leading hog producing States, imports live stock during the year, \$21,682,888.25, value of honey and wax produced, \$22,210.25; products of orchards and vineyards, \$1,889,364.68.

There were eight counties that this year harvested over 500,000 bushels of wheat each, and forty-two counties which raised over 1,000,000 bushels of corn each.

While it is true that the long-continued dry weather, and the armies of chinch bugs, did immense damage to the crops of the State during 1881, yet there need be no immediate apprehension that the farmers are in want, when it is ascertained that the value of \$123,450,400.95 is divided among them this year.

## A New York Farmer on the Value of Straw as Food for Cattle.

Col. Curtis, of Charlton, N. Y., writes to the N. Y. Tribune his experience in the use of straw in feeding stock. He says:

"My estimate of straw is much greater than that of most farmers. Of course its value varies with the locality. Where there is a demand for its manufacture into paper it usually ranges higher in price than in localities where there is no such demand, and in the neighborhood of cities where it is wanted for bedding it brings more. I have known it to sell for more to paper-makers than the price of hay. These circumstances determine its commercial value; my estimate of it is in connection with the farm. Experience has taught me how to use it most economically, and at the same time I think most profitably, by feeding it to stock. I do not rely upon it solely as food, although I have wintered cattle and horses upon oat and barley straw exclusively, and had them do well. Rye and wheat straw is too coarse and unpalatable for stock to thrive on alone, but when fed as adjuncts to grain it serves the purpose to fill the stomach and distend the bowels, which are necessary for the health of all animals, and at the same time it affords some nutriment, but not equal to that of oat or barley straw."

## Agricultural Items.

At a meeting of the Dairy Convention at Cedar Rapids, Iow, Col. F. D. Curtis, of Charlton, N. Y., read a paper upon "Needs of the Western Dairy," in which he said that the great need is profitable dairy stock. To secure this dairymen must raise their own cows, and to secure the highest returns better feed and shelter must be produced. He recommended the earlier cutting of grass for hay, and gave it as a fact that cows running down in flesh cannot give healthy milk.

W. F. Brown, in the Ohio Farmer, in an article on the painting of buildings, says there are plenty of barns in his neighborhood that present a respectable appearance that have been built from 40 to 50 years and have never been painted, and it is his judgment, from experience in keeping his dwelling house painted, that if these barns had been kept painted so as to look well, the cost would have been three or four times greater than to newly weatherboard them. To look well, a building would need a coat of paint about once in five years, and if neglected it looks worse than if not painted at all. It would be upon to decide the question to paint or not to paint, as a rule, he would say not.

As it is the aim of all farmers, particularly in the West, to get rid of their straw in the easiest possible way, and some of them make no effort to utilize it in any way whatever, but rather consider it a burden. Such farmers make a mistake which the inevitable depletion in their soils invariably proves. Others, more wise, strive to convert it into manure with little effort, and we are bound to say, with little judgment. My father, who was a large farmer, was a representative of this class. He thought straw should be

kept on the farm and should be returned to the fields. His plan was to throw it out into the barnyard and spread it around three or four feet thick and let the cattle wallow in it, lie on it, and tread it down. The cattle mingled their droppings with it; but this did not give the straw a chance to dry, and in the spring he had a mass of coarse stuff saturated with water, which, when carted to the fields, was difficult to plow under, and afforded very little stimulus to plant growth. It was easy to get rid of the straw in this way, but it was not easy to see any immediate practical benefit to the crops.

It always had a weakness for keeping a large number of stock; hence I was often put to wit's end to get them through the winter. On this account I was led to utilize the straw to the greatest possible extent. Father used to say that I could winter more stock on less feed and, after consuming 45 bushels of the cooked meal the hogs gained 750 pounds, or very nearly 15 pounds of pork to the bushel of meal.

## The Poultry Yard.

Mating Breeders.

C. J. Ward, in the Journal and Record, says that mating fowls for breeding is one of the nicest points in poultry culture, and to attain the most satisfactory results this matter should be carefully studied at the outset. Nowadays breeding to feather, size, shape, features and other fine points that change that occur from time to time to bring this thing to a nice degree of perfection, is more than the novice is able to accomplish without having experience or wise counsel from others. Too often the beginner is led into the belief that matching in the show pen is mating. Matching is not mating, and parti-colored fowls, more particularly, that will pass as properly matched in the show coop, as near alike in distinctive color as may be, will not usually breed together like their kind.

"I always had a weakness for keeping

same hogs next fed 14 days on corn meal and water mixed, consumed 55 1/2 bushels of corn and gained 731 pounds, or 13 1/2 pounds of pork to the bushel. He then fed them 14 days on corn meal cooked, and after consuming 45 bushels of the cooked meal the hogs gained 750 pounds, or very nearly 15 pounds of pork to the bushel of meal.

Having made arrangements with the Michigan Central Railroad to run the Michigan Farmer, we will furnish the Michigan Farmer and the Cincinnati Weekly Commercial a large, 3-page, 50-column Family Newspaper, printed in a large, clear, legible type, making it a reading matter for the money than any other newspaper in the country, the issue of each week containing over 1,000 square feet of printed matter, and is not surprised for general reading, one year for \$2.50, and will give a free prize to the subscriber who sends in the most money to the Michigan Central Railroad, and receive a copy of the Michigan Farmer and free of all cost—the books being unadorned, beautifully printed on good paper, in paper covers.

"Vendor's Weather Almanac for 1882," written expressly for the United States by Prof. Henry G. Vennor, the noted Weather Professor, will be published in the Michigan Farmer, and the Cincinnati Weekly Commercial, a large, 3-page, 50-column Family Newspaper, printed in a large, clear, legible type, making it a reading matter for the money than any other newspaper in the country, the issue of each week containing over 1,000 square feet of printed matter, and is not surprised for general reading, one year for \$2.50, and will give a free prize to the subscriber who sends in the most money to the Michigan Central Railroad, and receive a copy of the Michigan Farmer and free of all cost—the books being unadorned, beautifully printed on good paper, in paper covers.

"Detroit and Bay City Division.

"Bay City & Saginaw Express..... 9:25 a.m. 12:45 p.m.  
Bay City & Saginaw Express..... 9:30 a.m. 12:45 p.m.  
Mackinaw Express, with sleepers..... 11:10 a.m. 7:10 a.m.  
Sunday excepted, daily (a) Saturday excepted.

"Henry C. WENTWORTH.

"Ticket office, 151 Jefferson Ave. and depot of Third St. Train runs Chicago time.

"L. M. S. & M. C. & MICHIGAN SOUTHERN RAILROAD.

"Depot Foot of Brush Street.

"Trains run by Detroit time. On and after

"Oct. 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22d, 23d, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 1st, 2d, 3d, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22d, 23d, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 1st, 2d, 3d, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22d, 23d, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 1st, 2d, 3d, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22d, 23d, 24th, 25th,

DECEMBER 27, 1881.

## THE MICHIGAN FARMER.

## Horticultural.

## ORNAMENTAL TREE PLANTING.

The winter, when most persons are laying plans for the operations of the coming year, is the appropriate time to prepare for the ornamentation of our yards and grounds, as well as of our drives, avenues, lanes and highways.

Few persons, we apprehend, will at the present time be found to question the desirability or, in fact, the pecuniary importance of such ornamentation. While comparatively few persons (aside, perhaps, from the possessors of city or village lots), actually put in practice their views on this subject; the cause, we opine, is not a disbelief of the wisdom and even desirability of such planting, but rather the fact that it is indispensable to the winning of an annual income, and is, therefore, deferred to some later and more convenient season—a period generally in the future—rarely in the present.

When we consider how desirable such planting has become, and is coming to be, with reference to its at least partial substitution for our wasting and wasted forests, in the way of a partial retention of their climatic influences; as well as in the increased attractiveness of our homes and neighborhoods; and, we may even add, the increased pecuniary value of homes and lands, so improved, the devising of an effective means of obviating this tendency to procrastination would seem to be a matter of no little moment.

As a remedy for the present unsatisfactory state of affairs, we can think of nothing more likely to prove effective than that modern panacea for so many of the evils that afflict society, so largely employed to arouse and inspire the sluggish elements of our nature—association. A glowing firebrand usually acquires increased intensity, when brought in contact with another; and a lighted taper is not quenched by lighting another; so, a man's feeble inclination in the direction of ornamental planting, may, by the influence or association, become wrought up to the pitch of determination and actual practice; so also, the thousand and one landholders, whose thoughts, given up to the life long effort to win a livelihood, perchance a fortune from their surroundings, may find themselves elevated to a new plane of thought; and come to comprehend that even pecuniary value may thus be added to their permanent surroundings; and that the attractions that may thus be added to their homes, while adding enjoyment to their passing hours, may be at the same time a means of attaching the young to their homes, and thus shielding them from the numberless ills that must ever beset the feet of those who early wander in untried ways.

The plan of associated action, herein suggested, is by no means a new and untried one. The city of Washington, our national capitol, prior to the late war, was, by some, characterized as "The City of Magnificent Distances;" but, more recently, under the influence of an association for the encouragement of tree planting, its character, in this respect, is very greatly changed; till, where once ungrated, unplanted, and even unoccupied streets existed, the view now reveals long vistas of vigorous, and well managed street and yard trees, the promise of a beauty, not yet fully developed, and which time alone can properly realize.

This, though a recent, is by no means a singular fact. Numerous others may be cited both in city and country. Kalamazoo, so universally known as the "Big Village" of Michigan, has also a national reputation for the good taste of its citizens, as manifested in the beauty of their streets, yards and public grounds; the cause of which is simply stated in the single word, trees; and that the new machinery a superior article of both sugar and syrup is obtained, and that the culture and manufacture yield excellent profits—better, in fact, than grain raising.

Mr. E. Graham said he was convinced that the culture of the amber cane would pay well in Michigan, and it would at least secure to the farmer a prime article—free from glucose—both of sugar and syrup. Where it was not very extensively raised mills and evaporators might be used in common and thus decrease expenses.

Mr. S. L. Fuller—I suppose the cane must be made up as soon as ready, otherwise it would be wasted.

Mr. Cook—No, the cane can be kept in stock three weeks and still it will make good sugar; after that it will not crystallize, but will for some time make good syrup. The universal verdict in the west, judging from the reports of the agricultural papers, is that it is more profitable than cane.

Mr. Graham said he made sorghum syrup in Minnesota 10 years ago, but owing to imperfections in the evaporation, it had a rather strong taste.

It was decided to order a five gallon cask of amber cane syrup of Mr. C. Kinney, of Norristown, Minnesota, a gentleman who has manufactured both the syrup and sugar largely and successfully; also a quantity of sugar.

Mr. Fuller read a letter from Mr. Kinney showing that last year he made \$2,000 net profit off 100 acres of amber cane, and the season was an exceedingly one.

Mr. Graham said that a gentleman he had found that his peach trees, where banked up to protect against mice, were being worked in by the borers. Would it be well to expose the base and roots in cold weather in order to hunt the borers?

Mr. Fuller—The best time to cut a hog-roe is when you find one. When you find a borer, bore him—with a wire.

The propriety of banking trees with ashes was discussed, the experience of some being excellent results, and of others that the ashes killed the trees. Several gentlemen said they could not believe that the ashes killed the trees, for they had so thoroughly tested the ashes in this respect.

S. T. Fuller said there were ashes and ashes. One of his neighbors spread ashes in his cow stable to cure scours; it cured the cattle. He (Fuller) put ashes under his cattle's feet for the same purpose, and

their hoofs came off. His ashes were of hickory, while his neighbor's were of driftwood—pine and other light wood.

Mr. Munson said he knew that hard-wood ash would, in some cases, kill peach trees when banked around the trees; he had seen it.

Discussing pear blight, it was stated that W. K. Gibson of Jackson had been very successful in preventing blight by cutting off all affected tips and banking coal ashes round the roots. Mr. Graham said he was of opinion that pear blight could be best prevented by not forcing trees too much by manure and cultivation. There were numerous examples where such pear orchards had escaped blight when all others had been ruined. Probably the best pear orchard in the country was a large one in Indiana, planted on abandoned sandy land. It has borne large crops and has never suffered from blight.

Mr. Fuller said Mr. Reynolds, near Traverse City, had a large pear orchard on light sand—eight years old—which had never suffered from blight. He had however, cultivated thoroughly.

After some discussion it was decided that the best time to trim peach and apple trees was in the spring, when it could be known how much they had been killed back.

Mr. Pearsall, from delegation attending the late State meeting at South Haven, made an interesting report respecting the exhibition. There was a very successful meeting, and a large display of fruits and flowers.

The statement that Mr. W. W. Weatherly last season applied 11 barrels of salt on less than an acre of grapes, with most excellent results, called up the question of salt as a fertilizer, and it was decided to make the salt-fertilizer question the special order for the next meeting.

In response to the question, What causes scab in potatoes? three answers were given. One gentleman said it was often caused by the application of ashes; another said it was the work of the potato beetle, and a third said it was caused by worms. An agricultural journal recently gave certain members of the Farmers' club "Hail Columbia" because they suggested, "the one that it was the work of the earthworm and the other that it was white grub. The writer in question said it was caused by parasitic fungi. Now the Valley fellows will come in for a dose.

Just after adjournment Secretary Cook remembered that he had been waited on by a committee from the Farmers' club with a proposition that the two societies unite in renting a reading room, to be used also for the purpose of holding meetings. The proposition seemed to meet with general favor, but it was too late to consider it, and the matter will come up at the next monthly meeting.

## Petroleum on Fruit Trees.

A Pennsylvania correspondent of the *Western Rural*, says, in commenting on the fact that Dr. Gibson, in a lecture at the Academy of Science, California, says petroleum is good to apply to fruit trees and shrubs:

"This is an error. I have come to the conclusion that the Doctor is an educated dunc or he would never recommend petroleum to any living vegetable, for it will kill anything it comes in contact with.

This we who have lived where petroleum is obtained in abundance have learned to our sorrow. Some of our forest trees that sprout when cut for years, die and no sprouts ever start for a long distance around where petroleum has been pumped.

But I have a story to relate, for I am a victim, and know whereof I speak. About ten or twelve years ago—the time does not matter, but it was before we in this region had learned what we know of the destructiveness of petroleum—one of my neighbors read in some paper that petroleum is the best thing to make fruit trees grow that could possibly be used.

Early in the spring he applied the petroleum with a brush to his trees. The result was that the trees put on a healthy appearance all through the season. They had just begun to bear the next spring and the trees were loaded down with blossoms and fruit. Then it was he let me into the secret. The bark on the trees looked very green and clean. I never saw trees look nicer. I had three orchards on my farm, all grafted fruit, and bearing nicely, but I could not bear to see farmer Henderson's trees so much brighter than mine. So I procured some oil and an old broom, and rubbed the bodies down with petroleum. So they were painted, but not very thick, for I wanted to reach all the trees. The result was, in a short time the bodies, or the bark on the trunks of the trees, were as green as any one could wish; in fact I never saw trees look nicer. My neighbors all admired and praised them, and began to prepare to treat their trees in the same manner. This year a got a barrel of oil and rolled it into the orchard. In the meantime I watched my trees closely, and by picking into the bark with the point of my knife, I found the inner bark was changing color. I warned my neighbors who had prepared to use it, and stopped the experiment where it was, but watched farmer Henderson's orchard. The next year the small trees began to die. My large ones never bore so well, but the limbs began to die. In two years, Henderson's orchard of small trees which was by the side of the road, was nearly all dead. In my orchard, in one year after, I counted 50 dead trees, and they are dying every year. My orchard is spoiled. There is no estimating the damage done me or my orchard by the use of petroleum. Now if you will use petroleum after this, I will not be to blame. It is just as sure to kill your trees as you use it, and don't forget it."

## Celery Worms.

D. W. Coquillett, a correspondent in the *Germania Telegraph*, describes in that journal the appearance and habits of the celery worm, which is becoming a great pest in Eastern market gardens, especially dry seasons.

S. T. Fuller said there were ashes and ashes. One of his neighbors spread ashes in his cow stable to cure scours; it cured the cattle. He (Fuller) put ashes under his cattle's feet for the same purpose, and

Guenee. They do not belong to the 'measuring' family; although being provided with only twelve legs, they loop up the body in walking, just as the measuring worms do; but as the moths into which they are finally transformed, differ widely from those belonging to the measuring family, entomologists have placed them in a different family, the *Noctuidae*, which also contains the cut worms and the army-worms.

"There are three broods of these celery worms produced in one season. The first brood appears in the latter part of May and during the month of June; the second brood appears in July and August, the third brood is hatched from the eggs in the latter part of September or in October, and become about one-half grown by the time that winter sets in, when they hibernate and finish their growth in the following spring. This at least is their history in this locality, but it is very probable in more Southern latitudes one or more additional broods are produced in one season.

"These worms are very subject to the attacks of internal parasites. On one occasion I found one of them nearly full grown, but dead; and upon breaking it open I found the interior cavity densely packed with the cocoons of some minute parasites which had lived since their birth within the worm's body, ultimately causing its death. I have also bred from these worms several tachina flies which, in the larva state, live within the body of the worm, finally causing its death.

"The celery worms are very much influenced by the state of the weather, wet weather being very unfavorable to them. Several years ago I reared a brood of these worms from the eggs and fed them on perfectly dry leaves—that is, leaves that were free from moisture. After a while the worms appeared to be constipated, and supposing this to be due to a lack of moisture, I dipped some leaves into water and fed them to the worms; shortly after this the latter were taken with a kind of dysentery, so which reduced them that all but one died; this one assumed the chrysalis form, but died before producing the moth. There can be but little doubt that the destruction of this brood was due to the wet food which I gave them; such food is known to be very injurious to the health of several different kinds of insects.

"From this it would appear that if the infested celery plants were thoroughly drenched with pure, cold water at intervals for several days, this alone would be sufficient to destroy the worms. In this locality the fall rains came on about the time that the last brood of these worms issued from the eggs, and as moisture is known to be very injurious to them, it is likely that many die before the winter sets in, or at least are so weakened as to be unable to survive the winter, and thus their increasing too rapidly is, in a great measure, checked."

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Be Careful with the Cherry Trees.

Every cherry grower must be fully aware of the great necessity to observe the utmost care in protecting cherry trees from injury of any kind, especially bruises. It is, therefore, not for them, but for those who do not know, that we give these hints.

A blow of the hoe, the scratching or barking by the singletoe in plowing or harrowing, or even a kick by the heel of a boot, will almost invariably cause such damage that the tree will never outgrow. A kind of gangrene sets in, which all the efforts of the tree, however young and vigorous it may be, will never recover from. We had a downtown tree as thick as a man's arm, which having a few ripe cherries that we wished to jar off to taste, it being the first fruiting, we struck the trunk with the heel of the boot, which broke through the bark. It seemed to be so trifling as not to be worth a thought; but the next year the bark was dead two inches in diameter. The following year it was three inches, and in four or five years after, one-half of the wood was exposed and dead; and in a year or two more the tree itself died; clearly from the one slight blow of the boot.

It will dissolve and expel tumors from the tumors in all stages of development. The tendency to cancerous humors there is checked very effectively. It removes fables, rheumatism, sciatica, and all diseases of the skin.

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## Apianian.

## A Canadian Apian.

Prof. A. J. Cook, of the Agricultural College, recently spent a short time with the well known apianist, D. A. Jones, of Beeton, Ont., and writes of what he saw, to the *Rural New Yorker*, as follows: He says:

"Mr. Jones is very emphatic in his advice to feed whenever the bees are not getting nectar from flowers—just a little each day to stimulate them so that breeding may go vigorously forward. Mr. Jones, however, has brought out two new points in connection with feeding: 1st, If the queen stop laying once, it is far more difficult to induce her to commence again than to keep her at work by judicious feeding, before she ceases to lay. Sometimes if she is forced to idleness from the entire cessation of storing on the part of the bees, during the latter part of summer and in autumn, it is impossible to get her to resume at all, even if we do feed. This adds new force to the advice; 'Always feed, especially in late summer and in autumn, when the bees are not gathering.' The second point is that this persistent idleness on the part of the queen, if once commenced late in the season, is much more marked in old queens than in young ones. This furnishes another reason for the advice which I have repeatedly given, 'Keep only young, vigorous queens.' To be sure, some queens show a remarkable prolificness the second and even the third year, and such queens should not only be kept, but I would breed from them; but as a rule we gain by keeping only the young queens in our apiaries.

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## Poetry.

## THE LIGHT IN THE EAST.

I saw the day fade into darkness;  
I saw the glow shade into gloom;  
And I felt a great dread in my soul as I said  
"Can the light bring a bid to its bloom?  
Can there ever be born a bright mornow  
Of sorrowful dark such as this?  
Will the sun ever shine with its glory divine,  
And the beauty and blessing I miss?"

I sat in my doff half despairing;  
I knew not the way I should grope;  
So I wandered and wept by my hope as it slept,  
And I feared it the death of my hope.  
More deep was the darkness, and denser  
The gloom that enveloped me there;  
And my faith grew so weak it no longer could speak  
The sweet syllables shaping a prayer.

Oh Father, forbearing and tender,  
Have mercy on souls that are dumb!  
To their silence reply through the dark, "It is I."  
As in comforting love than dost come;  
The need may be deepest that cries not  
For lack of strong agony's word;  
Oh Father come near with thy comfort and cheer,  
And give answer as if thou hadst heard!

A bird singing low in the silence,  
Brought healing to my heart.  
For I saw, looking by the horizon bar,  
The sun never set on a yesterday yet,  
To rise on a morrow deferred.  
The dawn is as sure as the darkness,  
The pitcher is as true as the noon,  
For the light in the east never failed us, no  
face.

To make certain the morning and noon."  
—From *Geroldine, A Souvenir of the St. Lawrence*.

## ROUND THE YEAR.

The daisies blossom here and there,  
The clover heads nod everywhere,  
And everywhere brown swallows fly,  
Swift dipping low, swift soaring high,  
Ah, sweet the world, but time runs by!

Now leaves whiz earthward, crisp and brown,  
Now wandering balls of thistly dots move on, like ghosts that cannot lie;  
The fields are bare, the roads are dry,  
Ah, sweet the world, but time runs by!

Sweet, sweet world clothed around in white,  
The snow-drifts melt in April rain,  
All lovely things come back again,  
Warm budding woods and tender sky.  
Song, nest and blossom—glad am I  
That God has made the time run by!

## Miscellaneous.

## LITTLE SLY BOOTS.

BY THE AUTHOR OF "A GREAT MISTAKE," "HUSBAND AND WIFE," "YES OR NO?" KING COPHETUA; OR, RUBY NORTH'S LOVERS," "ROSE OF THE WORLD," &c.

(Continued.)

"She is a little schoolgirl of sixteen then, if you must know."

The girls were brought out abruptly, almost blithely, and they made Oldentowers stare aghast.

"Gracious Heaven!" he exclaimed.

"And the veriest little coquette that walks the earth in high-heeled shoes."

"Gracious Heaven!" exclaimed the little nobleman again.

"But such a beauty, James—such a little Dresden-china darling! She has golden

"Yes—I no doubt!" interposed Lord Oldentowers hurriedly.

"But what is she, and where did you meet her? She's not another Patty Barnes, I hope?"

"I am not quite so mad at that. Her mother, Mrs. Dering, has the next place to ours—that cottage called Gable End—you remember?—and Floss is still in the schoolroom, poor darling, under the hands of a fishing governess."

"Well?"

"Well! How do such things begin? Opportunities are so plentiful in the country, even when a girl is not out—walk to a church of a spring morning, a chat by her mother's garden-wall while you are eating plums together, a seat next hers in the front row at the penny readings. I know no more how it came about than the man in the moon; but the thing is done. I am head over ears in love with Floss Dering; and I am going to call on her to bless myself with you are aware."

Lord Oldentowers indulged in a long and rufous whistle.

"How is it some fellows are always falling in love?" he asked in naive surprise.

"I used to see lots of nice girls when I was single, and I liked them all; but I never felt the least inclination to marry one of them."

"Yet your time came," said Humphrey gloomily.

"To marry—yes, of course! But Miss Dering? Does she know of your attachment, Humphrey?"

"Yes."

"And she?"

"We are engaged, I tell you, Lord Oldentowers. She has promised to wait until I am in a position to claim her."

"And her mother consents to such an infinite arrangement?"

Humphrey's face fell.

"Her mother knows nothing at present of our engagement," he returned curtly. "Please make no secret to keep it secret. She is so young. What was it to do?"

"I know what I should have done," said Lord Oldentowers gravely. "But then I am not in love."

"It is no joke!" declared poor Humphrey, with a kind of groan. "Fellows may laugh and say there is no such thing as falling in love nowadays. Isn't there?"

Lord Oldentowers looked at his friend's haggard face in wonder and pity. That Humphrey Lamont, of all men in the world, should be reduced to such a state as that, and by a little girl out of the nursery!

"You are sure you have nothing else on your mind, old boy?" he asked affectionately.

"Is not that enough to go on with?" demanded Humphrey, bursting into a wretched laugh. "How can I tell what may arise to separate us? I tell you, James, I should go mad, if I was to lose her!"

"No fear of that, I should say," returned his friend, clasping himself very creditably to his new role of sympathizer in a sentimental distress. "Miss Dering has drawn a prize in the great lottery, and I'll be bound she knows it."

"Oh, as for Floss—Heaven bless her!—I believe she would wait till we were both gray—a contingency nearer realization by sixteen years in my case than in hers! It's her mother I am afraid of. Of course Mrs. Dering will expect Floss to make a great match. And my darling is such a dainty, lovely little thing—you don't know, James!"

Mr. Lamont sank into a chair as he spoke, and Marjory gently. "Do help me to

his hands in his pockets, his chin on his breast, and gazed, smiling, into the fire like a man rapt in a vision.

"It is a bad business, Humphrey, I am afraid," began Lord Oldentowers after a pause; and Humphrey, looking up, fiercely declared that no one knew better than he did.

"I tell you I hate myself for being the cause of deceit and double-dealing in that innocent child! But, to speak out more with my prospects, or want of prospects, would be like giving Floss up for ever. I know Mrs. Dering well enough for that."

"It is a bad business, old man," repeated Lord Oldentowers.

"Sometimes," continued Humphrey, as he started up and began to pace the room impetuously, knocking the chairs out of his way as he walked, "I feel tempted to take my darling away and marry her, and so make sure that we shall not be parted! But the life I lead in London would kill her. I cannot take such an advantage of her loving ignorance!"

"No, of course not. If ever you let me be your banker for a while until you can look round. Not that I advise—"

Humphrey stopped in his stormy walk and caught his friend's hand in a big grip of wordless gratitude.

"You always were a trump, James!" he cried, a hand of sob cooking the man's face. "For I saw, looking by the horizon bar, the dawn is as sure as the darkness, the pitcher is as true as the noon, for the light in the east never failed us, no face."

"To make certain the morning and noon."  
—From *Geroldine, A Souvenir of the St. Lawrence*.

persuade Bob. He thinks so much of your opinion."

"When it agrees with my own, miss."

Humphrey caught Miss Sebright's two hands in his and gave them a brotherly squeeze.

"I don't blame Bob," he said cordially, "for not wanting to lose his household—a fairy that I can remember trotting about these old rooms in short frocks, and who even then was the sweetest and most thoughtful of little women. But—"

"You think I am right?" interrupted Marjory eagerly, and coloring a little as she withdrew her hands. "I felt sure you would. Bob, you can't hold out any longer; we are two to one!"

"Bob, old man," said Mr. Lamont kindly.

"If you do give your consent to the plan, I know of a—a family where I think your sister would be made very happy, and where, Heaven knows, a sweet influence like hers is sorely needed just now."

"You do?" Marjory cried, clapping her hands. "There, Mr. Lamont finds

me a situation among his own friends, where I shall not starved or numbered as you seem to dread, you won't say 'N'ay longer, dear, will you?" Let me try it, at any rate, I promise you that the very first time I go to Friar's Cross to-morrow, I will come back to dear old Charlotte Street and be made much of by Tools and Lill."

"Heaven bless my Marjory!" was all old Bob could say as he drew her to his side and kissed her blooming cheek. And Mr. Lamont felt that the girl had gained her point.

"I am going down to Friar's Cross to-morrow," he said hurriedly, "and I will drop Bob a line as soon as I have spoken with Mrs. Dering. Good-bye, Marjory. Bob is a lucky dog to have such a sister! Good-bye."

"But what am I to have such a Bob?" laughed Marjory, shaking hands with the departing visitor. "Please don't forget—no, I don't mean that—I know you never forget to do a kindness—I mean write soon. Oh," she added suddenly, running out upon the landing and speaking over the balustrades again to the young man who was already half-way down-stairs, "I for you to give you a list of my qualifications? Can you remember them?" English, French, German, advanced arithmetic, good-reading, very good arithmetic, and plain sewing. That's all!"

"Ah! I have no idea, Miss Sebright, that you are so learned a little body. But I shall certainly suppress the plain sewing. I shall convert it into art-embroidery, so as to

not approve of your eating too many bonbons."

"Oh, but there are all sorts of things man-

na to do not approve of Stony dear!" replied Floss innocently as she popped a raspberry drop into her mouth from the little heap on the scale; and Lord Oldentowers saw that she flushed at the words.

Humphrey was busy exhausting Mrs. Wibley's stock; and the widow, in a tremble of excitement over such an unprecedented sale, was rattling her lollipops and jingling her scales and snapping her twine like on a dream.

"What are you going to do with that luggage, Miss Dering?" asked Lord Oldentowers, carrying the small mound of packing that had accumulated on the counter.

"Oh, you must help me to carry this home," replied the little beauty—"you and Humphrey—and Mr. Lamont! And then you will both come in and dine with Stony and me."

"My dear!" remonstrated the governess hopefully. "Pray do not be so thoughts."

At this Floss pulled Humphrey a little on one side and stood on tip-toe to whisper in his ear.

"Do you mind Lord Oldentowers?" she asked.

"Tell! No, my dear! James is a trump, and one of my o'dest friends, you have often heard me say."

"Then shall hear the fun as well?"

Floss decided, looking round and beckoning to Lord Oldentowers.

He obeyed the young lady's summons with much solemnity; and Miss Stone was left in the background, where she stood nervously tapping the floor with her foot.

"What do you think?" the pretty child began in a wobbly whisper. "Mamma and Uncle Rex are out for the whole evening! They are dining at the Athelmers"; and it is such a long drive they had to start early. That is how Stony and I happened to be in the village at this hour."

"But that will do them thin!"

"But that will do them thin!" murmured Mr. Lamont fondly.

"Wrong?"

"Demand what you have in my pocket?"

Floss clapped her hands.

"What is it?" she whispered coaxingly.

"Do tell me!"

"When you have given me the letter."

"Oh, dear—oh, dear! Was there ever such a provoking—Suppose I haven't the letter here?"

"Yes, but I think you have. Come, darling, give it to me!"

"There, then! And I shall hate Stony worse than ever, just because you take so much interest in her."

The exchange was evidently effected. Sub-

dued exclamations of delight were audible in the treble voice as Humphrey fastened and strummed on the piano all day, you would have been very glad to get out for a breath of fresh air. It is so dull always in our rooms at Gable End. But, now you and Lord Oldentowers have come, we will dine together, can't we? It will be awfully jolly!"

"What do you think?" the pretty child asked again.

"Mamma would not know anything at all about it," urged Floss. "Are you afraid Stony will tell? Ah, ha!" she tossed her velvet-capped head triumphantly.

"She dares not! Stony is in my power, and she is aware of it. Look at her now—how uncomfor-table is she! She knows very well what I am talking about."

Lord Oldentowers, looking on in pro-

found amazement at this little scene, was

so deeply interested in the girl's

giggling that he could not

help laughing.

"It is so pleasant to smell the English air again!" sighed the owner of Oldentowers.

"And it is sweeter in Elsmore than any-

where else!"

Even Humphrey, eager as he was for

the first glimpse of Gable End, could not

admit the charm of the scene and the

hours they spent in the village.

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"Well?"

"Well!

## THE AMERICAN IDEAL.

An independent young man; A right kind of stuff—young man; A deep, comprehensible, Plain-spoken, sensible, Thorowhale self-made young man. A not-to-be-beaten young man; An up-to-the-front young man; A genuine, plucky, Happy-go-lucky, Try-it-again young man. A knowledge-seeking young man; A real wide-wake young man, A working-in-season; Find-out-the-reason, Not-too-smart to learn young man. A look-out-for-others young man; A practice-not-preach young man; Kind, sympathetic, Not-all-theoretical, One in a thousand young man. An affable, courteous young man; A know-how to say young man; A knight of true chivalry, Frank in delivery, Making his mark young man, A now-a-days scarce young man, A hard-to-be-found young man, A perfectly self-possessed, Not-always-overdressed, Kind-like young man. —Cincinnati Commercial.

## The Secretary of the Navy First Sees a Ship.

"And is this a ship?" asked the secretary of the marines at the navy-yard.

"I have heard of ships from my youth up, and have long desired to see one.

Pray, do they float? Which end goes first? Why not have one stick instead of three sticking out of the decks?

Why is not that stick upright like the rest?" asked the secretary of the navy of the commandant of the navy-yard,

pointing to the bowsprit.

"That is the bowsprit," said the commandant. "Bowsprits never stick up. They are meek and lowly in all their ways."

"What are these holes for?" asked the secretary, pointing to the open hatchways. "Why have you made such deep excavations in the vessel?"

"The ship is built around these holes," said the commandant, "but they extend no farther than the water. If they did the ship would sink."

"Were you ever in a storm at sea?" asked the secretary of the commandant.

"Only once," replied the commandant. "It was a typhoon in longitude 81° off the equator. We were blown clean out of the water twice, and spun for miles through the air like a balloon. I shall never forget the terrible appearance of the sea as we looked down upon it from the clouds. We got down safely to water at last, and tied the ship to a spout. It was a terrible time."

"Deary, deary me," said the secretary, "how interesting. And you lived through it all! Tell us some more. But let me inquire first, is the captain of a vessel equal in rank to the captain?"

"In ordinary times," said the commandant, "the captain outranks the captain. But the captain always takes command of the ship when the anchor is weighed."

"Indeed," replied the secretary. "But where is your fourth castle? I do not behold any castle on board at all!"

"Fourth castle! Fourth castle! What do you mean, secretary?" asked the amazed commandant.

"Why, in all sea tales I've read of the fourth castle," said the secretary. "Oh, you mean the 'fokesle,'" said the commandant.

"The what?" asked the mystified secretary.

"Fokesle, fokesle—place where the crew live. Down there," said the commandant.

"Why, it's a hole," said the secretary. "Captain, I do not approve of your keeping your men in such dark, damp cells. They'll catch the rheumatism."

"And do the sailors really climb up there," asked the secretary, pointing aloft—"up these little rope-ladders? How perilous!"

"They do," replied the commandant.

"I must improve on that," said the secretary. "I will introduce a great reform in the service. I will save the life of many a gallant tar. Let all the masts be provided with hydraulic elevators."

"It shall be done," said the commandant.

"Call the officer of the watch," suddenly demanded the secretary; then remarking in an aside: "I'll show him that I know something about ships."

The officer appears.

"Officer," said the secretary, "show us your watches, I want to see if they're in good order."

"Sir, the watches were all sent on shore this morning to be cleaned," replied the officer of the watch.

"That's pretty work," growled the secretary. "Why, where's the ship's jeweler? How do you suppose you would have the correct time if you were to keep an engagement with an enemy?"

"We should take the sun previously," replied the officer of the watch.

"I do not wish you to take the sun, thundered the secretary. "I will not allow the sun to be taken on this or any other United States vessel. You do not need the sun. It is a villainous, vicious paper—bright, and edited with a certain amount of Satanic ability. I admit, but demoralizing to the correct discipline of the navy. If you desire to take anything, take the Evening Post or the Philadelphia Ledger. Take a good, heavy paper, that will serve to ballast both the ship and your minds. Well, sir, if you have no watches on board, show us your clocks. You are officer of the clocks

as well as the watches, are you not?"

"Aye, aye, sir!" said the officer of the watch.

"I! I! What in the world makes you so egotistical in expressing yourself? Why don't you say yes, sir, like a white man?" said the secretary.

"Yes, sir. But I am sorry to say that it was necessary to reef the pendulums of our clocks during the last gale, and they've not been shaken out yet."

"And what's all that banging for?" said the secretary. "Is it a naval engagement?"

"We are firing the customary salute of 19 guns in your honor," said the commandant.

"Oh, you are, are you? Are there bullets in any of 'em? Are they pointed this way? I don't like it. It makes me nervous. I shall have that practice stopped. Commandant, after this, fire anvils or toy pistols, and save powder. Dear me, if Chester would only let me stay, how cheap I could run our navy. I would abolish the ships altogether. We've got hardly any now, and so far as those are concerned that we have, we might as well have none at all. Good morning, commandant.—[New York Graphic.]

## Squeers in London.

The scandal connected with the management of the St. Paul industrial school is related by the Daily Telegraph. An attempt to discover the cruelties which were there practiced was made by Mrs. Surr, a member of the school board. "She worked in vain for many months. Her charges against the management of the school were treated as 'exaggerations.' Were there not managers? Was it not known that boys in such schools were more than usually insubordinate and troublesome? Was not Mr. Scruton a 'respected' member of the board, officially 'responsible'?" How could any one believe that anything was wrong when the accuser was a lady, who was "actuated, no doubt, by the best motives," but whose charges positively implied neglect of duty on the part of our colleagues?" It was too ridiculous to believe that Mrs. Surr, who had nothing officially to do with the school, should be guilty of dereliction of duty. Besides had not the government inspectors visited the school, and how could they fail to find out faults? Nevertheless Mrs. Surr persevered, she would not be beaten even by these formidable platitudes of masculine officialism. She appealed again and again to the board, but they refused to institute an inquiry, and put her aside as an intermeddling person who disturbed the proceedings of the august body by talking about ugly subjects. She then addressed herself to the home office, and the secretary of state, and found out what his own inspectors had not discovered, that the courageous and loyal lady—loyal to the noblest instinct of womanhood, the love and care of children—was right, and that certain of the officials had been guilty either of cruelty or connivance, while the board itself had, it was clear, grossly neglected its duties. Still the London school board was not convinced. Mr. Scruton demanded inquiry and evidence; he would meet his accuser, Mrs. Surr, face to face. He did so with every advantage, as a committee of the board—the very body that had screened and defended him all along—conducted the inquiry. The statements adduced abundantly justified all the accusations. If a master could not find out which boy had disturbed him by talking, the whole school was put on bread and water, and slaughtering them while in the unit condition caused by this treatment. Formerly he invented a feed car, which was tried, but was not a success. The grain and water were placed on the roof, and passed down by tubes when required; but the troughs in the crowded cattle-cars got dirty, and the animals refused to eat out of them. An attempt was then made to substitute carts with compartments, so as to keep the cattle separate, but this rendered the carts unfit for any other purpose on the return trip, and was abandoned.

Mr. Tingley's present scheme is a simple one. It is to establish a number of "cattle restaurants" along each line of railroad that transports live stock. They will be 200 miles apart, and the cattle can be fed and watered every 12 hours. When a train with a load of cattle on board gets within 20 miles of one of these restaurants, a telegram will be sent to the officer in charge, and when the train arrives everything will be in readiness. Great iron cups, about as large as, and a good-sized kitchen pot, will contain food and water, run into them through rubber pipes from tanks above. The train will stop between two rows of these troughs, those on one side containing water and those on the other side holding four quarts of food, consisting of a mixture of ground corn, oats and cut hay. Each car will have 16 openings on each side, all of which can be easily closed when the car, which need not be more than an ordinary cattle car, such as is at present used, is required for other purposes on the return trip. Into each of these openings a trough with food or water will be pushed by means of a sliding bar upon which it rests. It will move forward to the car direct or sideways, as may be required to reach the opening, the side motion being accomplished by sliding it along another bar extending the whole length of the restaurant, the bar by which it is pushed forward accompanying. The flexible rubber tubes through which the food and water pass will, of course, offer no resistance. Mr. Tingley has in his office a model of a restaurant.—[New York Sun.]

How Postage Stamps are Made.

The number of ordinary postage stamps issued in 1881 was 954,128,440, and value \$24,040,643. The method of printing postage stamps is as follows: The printing is done from steel plates, on which 200 stamps are engraved, and

the paper used is of a peculiar texture, somewhat resembling that employed for bank notes. Two men cover the plates with colored inks and pass them to a man and girl, who print them with large rolling hand presses. Three of these little squads are employed all the time, although ten presses can be put in operation if necessary. The colors used in the inks are ultra-marine blue, Prussian blue, chrome yellow and Prussian blue (green), vermilion and carmine.

After the sheets of paper on which

## A Cows Mischief.

Paul Boynton was in the service of Peru trying to do torpedo work in the late unpleasantness with Chile, and he tells how a cow brought peace negotiations to an untimely end as follows: "A council was held Jan. 15 at Miraflores, a little water-place near Lima. The Peruvian and Chilean armies lay facing each other, so near that the men could look into each other's eyes. Representatives of the United States, France, England, and other countries attended the meeting. Don Nicolas de Perol and two representative Chileans were also in attendance. As an adde-camp I was around in front of the lines. The meeting came to a fixed understanding about 1 p. m. The arbitrators came to an agreement, and had returned for lunch. While they were at the meal, a cow ran out from a cholo or native Indian regiment stationed among the Peruvians. These Indians drew no rations from the Peruvian government. They got a dollar per day and found themselves. Their quartermasters were mostly women, whom they called Barboni, and who followed the march loaded down with food and cooking utensils. Well, the cow ran out and made straight for the Chilean line. The Indians were in dismay. They could not afford to lose the cow, which represented many a square meal, and the aristocrats forbade any soldier to advance. As a last resort a Chilean raised his gun to drop the cow and fired. Ugh! I almost shuddered when I think of what followed. Almost instantaneously the battle broke out all along both lines. Don Nicolas rushed out to take part. The foreign representatives left the meal unfinished and made a bee-line for Lima. From the hurried looks I took backward I am pretty sure that the Chilean Christians won the race. The carnage was terrible. The battle lasted all day. The Chilean fleet came up to the shore, and soon shells of all descriptions were shrieking through the air. To make a long story short, we were beaten again."

## VARIETIES.

## OLD SHOES.

How much a man is like old shoes! For instance, both a soul may lose; Both have been tanned, both are made tight By cobblers. Both get left and right. Both need a mate to be complete, And both are made to go on feet. They both need healing; oft are sold, And both in turn fall to mold. With shoes the last is last; with both, The shoe shall be last. When The shoe is out they're mended new; When men wear out they're men dead, too. They both are trod upon, and both Will tread on others, nothing loath. Both have their ties, and both incline, When polished, is the world to shine, And both peg out—and would you choose To be a man, or be his shoes?

"MARIA," said Mr. Jones, upon one of his worrying days, "it seems to me you might be more economical; now, there's my old clothes, why can't you make them over for the children, instead of giving them away?"

"Because they're worn out when you're made with them," answered Mrs. Jones. "It's no use making over things for the children that won't hold together; you could not do it yourself, smart as you are."

"Well, grumbled Jones, "I wouldn't have closets full of things milled for want of wear, if I was a woman, that's all. A penny saved is a penny earned."

That was in April. One warm day in May Mr. Jones went prancing through the closets looking for something he couldn't find and turning things generally inside out.

"Maria," she screamed, "where is my grey alpaca duster?"

"Make it over for Johnny."

"Aheem! Well, there's the brown linen one I bought last summer!"

"Clothes-bag!" mumbled Mrs. Jones, who seemed to have a difficulty in her speech at that moment. "Just made it into a nice one."

"Where are my lavender pants?" yelled Jones.

"Cut them up for Willie."

"Heavens!" groaned her husband; then in a voice of thunder: "Where have my blue suspenders got to?"

"Hung the baby-jumper with them."

"Maria!" asked the astonished man, in a subdued voice, "would you mind telling me what you have done with my silk hat; you haven't made that over for the baby, have you?"

"O, no, dear," answered his wife cheerfully. "I've used that for a hanging basket. It is full of plants and looking lovely."

Mr. Jones never mentions the word economy, or suggests making over—he has had enough of it.

ONCE upon a time a man became very much disengaged because his salary was not as big as a tobacco factory, so he borrowed \$3,000,000 of a bank, and forgot all about paying it back. He had neglected to mention to the bank people anything about the matter at the time he had negotiated with himself for the making of the loan. There came a day when it was necessary, in the transaction of business, for the bank to make use of some of its alleged money, and it was then discovered that the funds had disappeared. Of course the bank folks were more or less perplexed over this state of affairs, and the cashier, who, by the way, had taken the missing wealth, was questioned concerning its whereabouts. He frankly acknowledged that he had erred in making the appropriation, and was perfectly willing to pay it back; so he examined his pockets, and he could only turn out \$1.13. The cashier was real sorry about not being able to settle; he said he had lost the money, but that he had no intention of doing so at all, and that as soon as he found it he would bring it right back to the bank. He said he would not like to have the master go any further; his Sunday-school class might hear of it and think strangely of him, and altogether it would be best, he felt, if the whole matter was hushed right up.—*The Pat Con-tributor.*

"They do," replied the commandant.

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The officer appears.

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voice and manner as closely as his emotion would allow, addressed the grand chamberlain, who with other courtiers, was enjoying the scene, as follows: "Chamberlain, give orders that a gratification of 500 rubles be paid to that excellent actor, M. Alexander Michel." "That will do," interrupted Nicholas, laughing heartily; "I am quite satisfied with the resemblance of the portrait, and, as an emperor's word ought to be as good as his bond, you will see," he added, turning to the chamberlain, "that M. Michel has his money."

The *Sarria Observer* says: "A good joke is being told just now of an old resident living not a hundred miles from Sarria. Col. M. came to town and went to one of the leading hotels to dinner. A new feature has been introduced into the hotel since the colonel's last visit, in the shape of a waiter in full dress, swallow-tail coat, etc. The colonel came in and seated himself at a table, and the waiter came up and said: 'What will you have sir?' The colonel, who is a little deaf, shook his cordially by the hand, and rising, said: 'Really, you have the advantage of me, sir, er, where was it I met you before? Toronto?' Then, leading him to the window and turning him so that the light would fall upon his face, again remarked that the countenance was familiar, but he really could not place him, etc. The waiter blushed, of course, and repeated the remark: 'What will you have, sir?' The colonel thanked him, 'Really, I never take anything before dinner, and returning to his seat, he asked the waiter to be seated. The waiter, of course, excused himself, and sent a pretty dining room girl to wait on the colonel. The colonel went home and is still wondering who his distinguished friend was."

But what about the girls? They have an unimportant part in the family hive. Their help is to the mother what the young limbs and quick feet of the "handy" and "willing" boy are to the father. They are called upon out doors as well as in; to drive sheep, milk cows, possibly to plant corn, shorten the lives of innumerable Colorado beetles, perhaps even to drive the reaper or hay rake. But the thought that their help deserves the same recompence gained by their brothers, seldom occurs to the father and his careful spouse. They are fed and clothed, but are seldom rewarded by a pecuniary return for their work; for this they must fly outside the home, and if they ask for money they are reminded that theirs is the fault of the Dutch. "Giving too little and asking too much." For this very reason, they are never intrusted with money, seldom earn its real equivalent in labor, they grow into extravagant and improvident women.

Give the girl a chance. They need not the money and the discipline of earning it, as much as the boys. There are fewer employments open to them; they have less chance for their lives. Help them to help themselves. If they have a natural taste or talent for any particular work, educate them for it and let them do it, even if it necessitates the hiring of a girl to take their place in the kitchen. In this way the practical value of girls is apt to be realized; there is nothing so convincing as an appeal to the pocket book. If the daughters show no special inclination toward any particular branch of industry, but serve and save at home, pay them for their work. It amounts to the same thing in the end; you buy their clothes for them, or you pay them and they make their own purchases; in reality, their greatest gain is in independence, in self-reliance, in good judgment in purchasing, in decision of character. They are personally interested in expending their earnings wisely and economically, and in making every dollar do its duty. It is not calculated to foster one's self-respect to be obliged to ask of a father or mother money for every postage stamp, shoe lace or box of hair pins, neither is it pleasant to the paternal head to always demand for small sums.

If the daughter's help is not necessary at home and it is not desirable that she should go away to "do for herself," give her an opportunity to earn something in another way. Let her run the poultry department; help her in starting the enterprise and conducting it, even if you have to "take her note" for repayment. Many a weak sickly girl would gain health as well as wealth, keeping bees, raising small fruits, or even cultivating a melon patch. There is hardly a hamlet in the State where a girl might not sell from \$150 to \$200 worth of strawberries, raspberries, currants and cherries to those not

## Veterinary Department

Conducted by Prof. Robert Jennings, late of Philadelphia, Pa., author of "The Horse and the Farmer's Guide to Horse Training Made Easy," etc. Professional advice through the columns of this Journal to regular subscribers is given. Persons who desire to be advised are invited to send their full information to be answered to their satisfaction. No questions will be answered unless accompanied by a fee of one dollar. In order that correct information may be given the symptoms should be accurately described, how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. Private address, 301 First Street Detroit.

## Anasara in a Filly.

Kingsley, Mich., Dec. 13, 1881.

Veterinary Editor Michigan Farmer.

I have a grey mare four years old whose right hind leg began to swell two or three months ago, being at first in the pastern joint. At first it was noticed only in the morning, and would go down after driving. At length the swelling extended to the gambrel joint, which was swollen very full with two or three places looking as if the hair had been knocked off. I got a prescription for her blood, and she seemed better for a few days, then one night I found her in much pain, and so hard that she would not bear any weight on this leg at all. I used smartweed, turnwood and viager to no avail, and the swelling finally broke in three pieces. I can drive her a little, but the swelling stays in the pastern joint, which seems to be enlarging and she seems a little stiff in the gambrel also. Can you tell what to do?

SUBSCRIBER.

Answer.—The horse matures at the age of five years; at which time it is fitted to perform the duties imposed upon it in the service of its master. We deprecate the too common practice of breaking in the colt at the tender age of two or three years, more particularly in a northern climate, where the development of the animal is less rapid than it is in a southern one. At this age ossification, or the formation of bone, is but half completed, hence the limbs of the animal are not sufficiently strong to bear the strain, and unnatural concussion brought upon them when traveling upon the road; predisposing tender joints to injury, from which diseases of the most serious character frequently arise, often rendering the animal completely valueless. Chronic swellings about the legs of animals thus early broken in are sufficiently common to claim the attention of the ordinary observer. More particularly is this the case where the colt is from parents sound in their limbs from whatever cause. When there is no other disease lurking in the system, the swelling of one or more legs when at rest, is due to inflammatory irritation, either of an acute or chronic character, which determines a serious effusion in the cellular tissue of the part, commonly called stocking of the legs; readily distinguished by the pitting or indentations left upon the skin by pressure of the fingers. This type of disease requires constitutional treatment, liniments in such cases are of little use, hand rubbing is much better. Either of the following prescriptions may be used to advantage. Sulphate of iron, pulv. 1 oz; gentian root, pulv. 3 oz; nitrate of potassa, pulv. 2 oz, and 1 oz. Jamaica ginger root, pulv. Mix all together, and divide into 12 powders; give one night and morning.

## Debility in a Gelding.

OLIVET, Mich., Dec. 14, 1881.

Veterinary Editor Michigan Farmer.

I have a dapple grey gelding eight years old, which in September was taken with a violent chill, lasting two hours, after which his left foreleg began swelling, and continued till swollen full. Whilst the chill was on I gave him a gill of alcohol and bled him in the mouth freely, bathed his leg with smartweed, and applied blisters. After the swelling was partly down I used saltpetre and St. Jacob's Oil, and have fed him some sulphur. What is the matter with him, and what can I do for him?

A. C. J.

Answer.—Your description of the symptoms of disease in your gelding, will not enable us to properly diagnose the disease; but presume it to be of a typhoid or debilitating character, which the infiltration of the cellular tissue of the leg justifies. We would, therefore, recommend tonics, diuretics and stimulants, the proper remedies indicated by the symptoms. The bleeding, if it did not do injury, was un-called for. Give the following: Sulphate of iron, pulv. 1 oz; gentian root, pulv. 3 oz; nitrate of potassa, pulv. 2 oz, and 1 oz. Jamaica ginger root, pulv. Mix all together, and divide into 12 powders; give one night and morning.

## Stock Notes.

MR. D. P. DEWEY, of Grand Blanc, while on his way from the tariff convention, stopped over in Western New York, and purchased the entire crop of yearlings and two year old ewes of a noted breeder. They are all registered stock, are large and strong carcassed sheep, have heavy fleeces, with good length and thickness and fine quality of wool. They were sired by the well-known ram "Surprise," and the ewes are of the same flock as the ewe that sired the heaviest fleece of the public shearing in Western New York, against fifteen competitors. This is a fine addition to the Merinos of "Old Genesee."

DR. W. A. GIBSON, of Jackson, owner of the trotting stallion Tremont, reports the following sales of colts:

To A. Van Laghern, Kalamazoo, Mich., Stradom, by Tremont (record 2:30); Dam, Strader's Hambletonian; 2d dam by a bay colt, foaled April 20, 1881. Price, \$175.

To J. W. Parkhurst, Augusta, Mich., bay filly, foaled May 15, 1881. Sire, Tremont (record 2:30). Dam, by Fisk's Hambletonian Star; 2d dam by Old Henry Clay. Price, \$165.

W. J. G. DEAN, of Hanover, Jackson, Co., reports the following sales of Jerseys from his herd since Sept. 1st:

Cow, Effie Hudson 2516; to W. L. Gardner, Norwalk, Ohio.

Cow, Lucid Lee 1048; to Chas. H. Clark, Minneapolis, Minn.

Cow, Maid of Judah 2d 5435; to R. D. Bushnell, Jackson, Mich.

Heifer calf, Bell Alpheus; to Schuyler O. Olds, Lansing, Mich.

Heifer calf, Alice Dean; to Andrew J. Fish, Van Wert, Ohio.

Bull, Judge Marston; to Chas. H. Clarke, Minneapolis, Minn.

Bull, St. Marius; to Schuyler S. Olds, Lansing, Mich.

Bull, Rose's Duke; to Willard Weld, Portland Mich.

Bull, Hillsdale Duke; to A. F. Whelan, M. D., Hillsdale, Mich.

At the close of business on Saturday at the Michigan Central Stock Yards, Mr. Crocker, the Superintendent of the Yards, gathered all the employees around him and to each one gave a handsome and useful Christmas present. Not one was forgotten, from the bull puncher in the yards, to the gentleman who slings the lightning in the office. As the last present was handed out by Mr. Crocker, one of the boys came forward with a large roll under his arm, and Mr. Eugene McCarthy, in a few well chosen remarks, asked the acceptance by Mr. Crocker of a beautiful wolf-skin robe, as a small token of the regard in which he was held by the employer who had worked under him since he first took charge of the yards. Mr. Crocker was taken very short, but managed to remark that the cigars were on him.

According to the last report of the Commissioner of Agriculture, there are seven million persons in the United States engaged in agricultural pursuits. The total value of farms and farm implements is \$13,361,200,433, or two-thirds of the productive wealth of the nation. The value of live stock and farm products for 1878 was \$8,000,000,000, against \$2,800,000,000 of mining and manufacturing products. From this it appears that the majority of the adult male population is engaged in agriculture, and more than one-half of the wealth of the nation is invested in that industry.

We don't know much about it, of course, but we should think, after a man had been Secretary of the Treasury for three or four years, and had occasionally "dumped" \$50,000,000 into Wall street to relieve the money market, and had called-in \$20,000,000 sixes at one time, and bought \$2,000,000 of bonds every week, and disbursed \$1,000,000 one week and \$18,000,000 the next, it would gravel him awfully to go back into his law office when the administration changed, and make out an abstract of a farm away out in Bucksaw County and sell it for an old woman down in Kickapoo township, to an old fellow out in Waukandaw settlement, and get a fee of \$32, and have to wait four months for that, and then have to take a scroll for it. Perhaps the ex-Secretaries of the Treasury don't mind it, but we just say we don't believe we should like to get used to it.—Burlington Hawkeye.

HON. Ira Mayhew, LL. D., President of the Mayhew Business College of this city, has issued a new manual of Business Practice, with full directions for operating, which is specially adapted to the numerous and varied transactions of the several sets of Mayhew's University Bookkeeping. This valuable treatise and its admirable system of business practice, has been adopted in various leading colleges of the country, superseding all other systems and devices hitherto employed. Mr. Mayhew's various educational works are regarded as standards, and are certainly models in clearness of style and the system in which business subjects are exemplified. His work on book keeping is now used all over the United States in educational institutions, and should have a place in every business man's library.

to the extent of five inches no opening, but simply a thickened cordy condition of the peritoneum, when there commenced a cavity lined by mucous membrane, and running out at acute angles, two cornua, three and a half inches long, the right one inch, the left three-quarters of an inch in width. At the upper external angle of these hollow cornua were found abortive fallopian tubes, impervious, of one and a quarter inches long, when a pink body one inch in length and one and a half inches in thickness, supposed to be imperfect ovaries, were found; they tapered down to a line of the same color, and continuing about three inches, they were lost in a duplicature of the peritoneum." Such is a brief account of the result of the examination made, and contains all the important facts elicited. It will be seen that no womb was found, an imperfect vagina and ovaria, with impervious fallopian tubes, and no evidence of the fibrinated extremity of these tubes. It will not therefore, be thought strange that amid all this imperfection on the part of nature to adapt her organs to the accomplishment of such a complex process as that of reproduction, that she should be sterile.

## Death of W. S. George.

JUST as we got to press a dispatch has been received, announcing the death of W. S. George, publisher of the *Lansing Republican*. He died at Lansing, having returned from the South a few days ago.

## Food and Civilization.

In your issue of Dec. 13th, I read and admired an article in which the Russian has the best side of the argument. Widen out said article and will you not find that it is the vegetarians of the army that do the fighting and endure the harder work? That disease from eating unwholesome meat obtained from unwholesome animals has an injurious effect on the physical force of an army?

The tiger slays his healthy victim, whereas man eats his meat in abnormal condition, thus changing the nutrition of the tiger's food. The meat of a well-grown animal is excellent food for man, but the tiger prefers the blood. Does the English Government and the people of Great Britain live on blood?

VERGNESEN, Dec. 13, '81. J. L. B. KERR.

## Chicago Bucket Shops.

The Chicago Tribune has the following about the "bucket-shops" of that city, which are again in full blast:

"The 'bucket-shop' business is experiencing another boom in the city. Small concerns with a single dealer, like a crooked faro-bank, spring up here and there, and after remaining in existence long enough to fleece a few victims suspend, leaving the deluded customers without any resource, for the managers of the wash-room institutions are always irresponsible and never pay. A few of the more extensive concerns transact a legitimate business for a while, until they establish a fair reputation, and then they generally revert to the more profitable process of skinning the grangers who deal with them."

LYDIA E. PINKHAM's Vegetable compound revives the drooping spirits; invigorates and harmonizes the organic functions; gives elasticity and firmness to the step, restores the natural lustre to the eye, and plants on the pale cheeks of beauty the fresh roses of life's spring and early summer time.

BORDEN, SELLECK & CO., Chicago, sell the best and cheapest Car Starter made. With it one man can move a freight car.

At the Michigan Central Yards.

Saturday, Dec. 24, 1881.

The following were receipts at these yards:

Serial Stories

will be contributed to the *Youth's Companion* during the coming year, by W. D. Howells, William Black, Harriet Beecher Stowe, and J. T. Trowbridge. No other publication for the family furnishes so much entertainment and instruction of a superior order for so low a price.

JAS. H. GREGORY, of Marblehead, Mass., appears on our pages with announcement of seeds for 1882. Mr. Gregory is among the first whose well-earned reputation for care, and in his immense seed department, has inspired confidence among the thousands of buyers all over the United States.

"One of the members of this firm is the ex-President of a bucket-shop which failed for \$200,000 and never settled. Several suits against him growing out of its suspension are now pending in the courts. Notwithstanding their failure and heavy liabilities, it is said the partners of this mysterious firm are wealthy, and that they recently made a purchase of a piece of real estate near the new Board of Trade site, paying therefore the sum of \$130,000. The advantages of this combination plan are said to be that if one concern should show evidences of becoming weak the business may be turned all into one of the others; a change of officers may be made, the janitor a clerk, or any employee being put into the weak concern as manager, and it may be then allowed to go up, and creditors may whistle for their dues.

These shops are all reputed to be under the actual management of a firm whose members never appear in the valley, but who have a private office on Madison street, near Clark, whence they issue instructions to the 'managers' of the shops by telephone.

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No one whose blood is impure can feel well. There is a weary, languid feeling, and often a sense of discouragement and despondency. Persons having this feeling of listlessness and depression, should take Ayer's Sarsaparilla to purify and vitalize the blood.

AMONG the remarkable novelties of recent discovery is the boot-blacking plant, a native of New South Wales. The leaves of this shrub contain a tough substance grafted with all the properties and attributes of the finest boot polish. Squeeze them gently and they will yield some thick, dusky drops of sticky fluid, which must then be spread over the surface of the boot. This done, a polish of dazzling brilliancy may be brought out by a few light touches of the finishing brush.

At the Michigan Central Yards.

TUESDAY, Dec. 27, 1881.

The markets are more or less demoralized on account of the holidays, and the best we do is to give the rates of grain ruling on Friday last, the last day the Board of Trade was in session.

"Flour.—The receipts of flour in this market the past week were 8,000 bushels, and the shipments were 4,306 bushels. The market has been more satisfactory to the selling interest the past week, some outside orders causing an increased demand for stock, while the home trade has been quite active. White wheat brands show a slight decline in prices since our last report. Quotations Friday were as follows:

Fancy white (city mill)..... \$6 10 0 6 25  
Choice white wheat (country)..... 6 25 0 6 50  
Seconds..... 5 00 0 5 00  
Minnesota..... 5 00 0 5 00  
Michigan, palets..... 5 00 0 5 00  
5 00 0 5 00

Wheat.—The receipts of wheat for the week have been 44,800 bushels, and 39,650 bushels, the previous week. Shipments, 4,558 bushels. The receipts were again smaller, while the shipments were most nothing. The fluctuations in prices the past week have been very light, No. 1 white opening at \$1 33 per bush., and closing on Friday at \$1 31 1/2, and No. 2 red opening at \$1 24 and closing at \$1 23 1/2. Prices showed some change in rates, and at the close on Friday ruled as follows: January, \$1 34 1/2; February, \$1 30 1/2; March, \$1 88 1/2; April, \$1 40 1/2. Trading was light all week, and toward the close was very negligible. We do not look for much activity during the next ten days.

Corn.—Very little is moving. No. 2 corn is most stable, and rejected at 64 1/2c. New No. 2 would not command over 63 1/2c.

Oats.—Are quiet and market very steady. No. 1 white are quoted at 48c., No. 3 white at 46c. No. 1 mixed are quoted at 47c. 47 1/2c.

Barley.—Receivers report an inactive and somewhat depressed market. No. 2 barley could not be placed at over \$1 05 per bush., and most samples \$1 03 1/2c.

Flaxseed.—The market is firm and a fair trade is being realized. Choice apples command a good price.

Hay.—Very little offered for sale, light, but there is a demand. Probably \$1 per bush. is the best that can be had for ordinary parcels.

Feed.—Unmettled. For hens there is a demand at \$19 00, and for coarse middlings at \$10 50, and for fine middlings at \$10 25.

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